VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Virginia Department of Health
DIVISION OF ENVIRONMENTAL EPIDEMIOLOGY
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FREQUENTLY ASKED QUESTIONS ABOUT EXPOSURE TO ASBESTOS IN AIR

What is asbestos?

Asbestos is a naturally occurring family of fibrous minerals found in certain types of rock formations. These minerals are made of long, thin fibers that vary in length and are not generally visible to the human eye, but can be positively identified with a special type of microscope. Asbestos fibers are heat resistant, incombustible, possess great tensile strength, and cannot be easily degraded or destroyed. The six types of asbestos are chrysotile, amosite, crocidolite, anthophyllite, actinolyte, and tremolite. The minerals that have been most commonly used in buildings are chrysotile (white), amosite (brown), and crocidolite (blue). Approximately 95% of all asbestos used in commercial products is chrysotile.

What products contain asbestos?

Asbestos was used in the past in more than 3,000 products, including ceiling and floor tiles, thermal and electrical insulation, cement pipe and sheet, filters, coatings, brake linings, clutch facings, gaskets, plastics, fireproofing textiles, insulating papers, caulking, and protective clothing. The amount of asbestos contained in these products varies significantly from 1 to 100%, depending on the particular usage. Homes and buildings built before 1977 may have asbestos-containing materials. Most products made today do not contain asbestos.

How might I be exposed to asbestos?

Human exposure to asbestos is primarily through inhalation followed by ingestion of fibers. If asbestos fibers are inhaled into the lungs, some fibers may become deposited in the air passage. Fibers that are deposited in the deepest parts of the lung are removed more slowly; however, some can remain in place for several years and may never be removed.

How does asbestos enter the air?

When asbestos fibers are disturbed, they may become suspended in the air. The potential of an asbestos-containing material to release fibers into the air depends on its degree of friability. Friability is how easily a material can be crumbled or pulverized to a powder through hand

pressure. Breaking, crushing, cutting, moving, or disturbing asbestos-containing material may release fibers into the air.

How can I prevent asbestos exposure during remodeling?

If you suspect your house has asbestos containing material and you plan to remodel, it is recommended to contact a licensed professional because handling asbestos-containing materials may create an unnecessary hazard. Improper handling will increase the risk of exposure and may result in adverse health effects. Asbestos abatement contractors are licensed at the state level and specialize in the repair and removal of asbestos. If you decide to hire a contractor, it is advised that you obtain a written contract indicating the work plan, cleanup, and the applicable federal, state, and local regulations that the contractor must abide by. To determine whether an asbestos contractor is licensed, click on the following link: Department of Professional & Occupational Regulation. For state agency contacts that have a listing of accredited professionals in your area, click on the following link: State Asbestos Contacts.

If simple home improvements are performed without a licensed asbestos abatement contractor, it is recommended to follow these tips:

- Take precautions to avoid damaging asbestos-containing materials.
- Do not saw, sand, scrape, or drill holes in asbestos-containing materials.
- Keep all asbestos-containing material wet during removal to prevent dust and release of asbestos fibers into the air.
- Install new flooring over asbestos-containing flooring (when possible) because removing old flooring may cause fibers to be released, exposing individuals to high levels of asbestos.
- Use a wet mop when cleaning.
- Do not dust, sweep or vacuum debris that contains asbestos.
- Seal all asbestos-containing material in a tightly closed bag.

What are the health risks of asbestos exposure?

Although the inhalation of asbestos fibers can cause serious health risks, the risk of asbestos-related disease depends upon the level of airborne fibers and the length of time an individual breathes them. Research indicates that occupational workers who are exposed to asbestos for several years and inhale very high levels of asbestos fibers are at an increased risk of developing asbestosis (a fibrous scarring of the lungs), lung cancer, or mesothelioma (a cancer of the lining of the chest or abdominal cavity). However, at very low exposure levels, the risk may be negligible or zero. These diseases do not develop immediately after inhalation of asbestos fibers; it may take 10 to 20 years or more before symptoms appear.

What are the interactive effects of asbestos and cigarette smoke?

Cigarette smoking and exposure to asbestos multiplies the risk of developing lung cancer. People who are exposed to asbestos and smoke have an increased risk of lung cancer fifty to ninety times greater than people who do not smoke and are not exposed to asbestos.

Is there a medical test to determine whether I have been exposed to asbestos?

A chest x-ray is the most common test used to determine if you have been exposed to asbestos. X-rays cannot detect asbestos fibers, but can identify early signs of lung disease as a result of asbestos. Tests are available to measure asbestos fibers in urine, feces, mucous, or material rinsed out of the lung. In people who have been exposed, x-rays can often show elevated fibrosis lesions, which is an early sign of inhalation exposure to high levels of asbestos. Higher-than-average levels of asbestos fibers can only determine whether you have been exposed to asbestos, not whether you will experience any health effects. Low levels of asbestos fibers are found in the body fluids in nearly all people.

Are there any standards or guidelines to protect people from exposure to asbestos?

The U.S. Occupational Safety and Health Administration (OSHA) has established an enforceable limit of 100,000 fibers with lengths greater than or equal to 5 µm per cubic meter (0.1 fibers per cubic centimeter) of workplace air for 8-hour shifts and 40-hour work weeks. The EPA banned all new uses of asbestos on July 12, 1989; however, uses established before this date are still allowed. The EPA has established regulations that require school systems to inspect for damaged asbestos; and to eliminate or reduce exposure.

Whom should I contact to get more information about asbestos?

If you need further information regarding the health risks of asbestos, contact the Virginia Department of Health, Division of Environmental Epidemiology, 109 Governor Street, 4th Floor, Richmond, Virginia 23219, or call (804) 864-8182.

Additional information can be found:
Agency for Toxic Substances and Disease Registry – www.atsdr.cdc.gov
Environmental Protection Agency – www.epa.gov

Revised: Division of Environmental Epidemiology
April 2014